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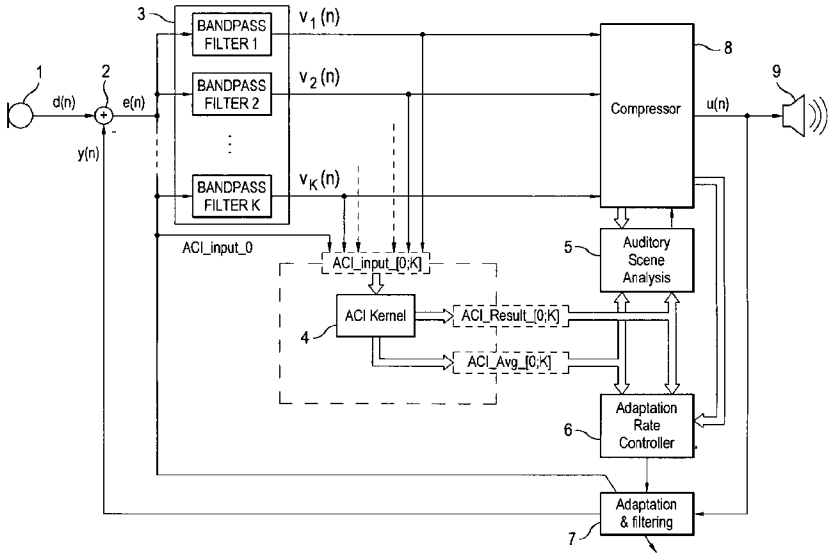
(54) **Title:** HEARING AID AND METHOD FOR CONTROLLING SIGNAL PROCESSING IN A HEARING AID




(57) **Abstract:** A hearing aid comprises a signal path for receiving at least one audio input signal and autocorrelation index (ACI) estimating means, wherein the ACI comprises down- sampling means for producing a sampling-rate reduced signal of said audio input signal, sign extraction means for extracting a sign signal of said sampling rate reduced signal, memory and delay means for producing and storing delayed versions of said sign signal, comparison means for comparing a subset of the delayed versions of said sign signal with a version of the non-delayed audio input signal, averaging means for averaging the outputs of the comparison means to extract delay specific estimates of said audio signal self-resemblance, and obtaining means for obtaining an estimated autocorrelation index by determining summarized features from the delay specific estimates of said audio signal self-resemblance.

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